

WHAT IS CLAIMED IS:

1 1. A liquid crystal display device comprising a sealing
2 material provided on a periphery of a substrate for preventing leakage
3 of liquid crystal, projections formed by etching a film formed on the
4 substrate, and another substrate opposing the substrate being remote
5 therefrom by a gap and being supported by the projections, wherein
6 an area occupying rate of the projections with respect to a region
7 enclosed by the sealing material is not less than 0.0001 and not more
8 than 0.003.

1 2. The liquid crystal display device of Claim 1, wherein the
2 area occupying rate is not less than 0.001 and not more than 0.002.

1 3. The liquid crystal display device of Claim 1, wherein the
2 area occupying rate is not less than 0.001 and not more than 0.0015.

1 4. The liquid crystal display device of any one of Claims 1 to 3,
2 wherein the film is formed of acrylic resin.

1 5. A liquid crystal display device comprising a sealing
2 material provided on a periphery of a substrate for preventing leakage
3 of liquid crystal, projections formed by etching a film formed on the
4 substrate, and another substrate opposing the substrate being remote
5 therefrom by a gap and being supported by the projections, wherein
6 heights of columnar spacers are varied.

1 6. The liquid crystal display device of claims 5, wherein the
2 heights are different by not less than 0.05 μm .

1 7. A method for manufacturing liquid crystal display device
2 comprising the steps of forming projections by etching a film formed
3 on a substrate, applying a sealing material on a periphery of the
4 substrate in an annular form expect for an injection inlet for liquid
5 crystal, overlapping another substrate onto the substrate with the
6 projections and the sealing material being interposed therebetween,
7 injecting liquid crystal through the liquid crystal injection inlet into a
8 region enclosed by the sealing material, and applying a pressure of not
9 less than 1,000 Pa and not more than 40,000 Pa to surfaces of both
10 substrates.

1 8. The method of Claim 7, wherein a pressure of not less than
2 1,000 Pa and not more than 20,000 Pa is applied onto the surfaces of the
3 substrates.

1 9. The method of any one of Claims 7 to 8, wherein a sealing
2 agent is applied to the liquid crystal injection inlet simultaneously with
3 applying pressure to surfaces of both substrates.

1 10. A method for manufacturing a liquid crystal display
2 device comprising the steps of forming projections by etching a film
3 formed on a substrate, applying a sealing material on a periphery of
4 the substrate in an annular form expect for an injection inlet for liquid
5 crystal, overlapping another substrate onto the substrate with the

6 projections and the sealing material being interposed therebetween,
7 injecting liquid crystal through the liquid crystal injection inlet into a
8 region enclosed by the seal agent, and applying a sealing agent to the
9 injection inlet of the liquid crystal display device after elapse of a
10 specified time from completion of injecting liquid crystal.

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